

IN THE CLAIMS

1. (Previously Presented) A computer system for a client network address translation (NAT) pool, said computer system comprising:

a memory pool operable to store client NAT addresses, each client NAT address being associated with an identity of an entity on a network;

a control block, said control block constructed and arranged to contain at least one parameter, said control block containing an address for said memory pool, said control block identifying client NAT addresses for the computer system determined prior to allocation of said memory pool;

wherein said memory pool includes a pool header having a pointer; and

wherein said memory pool includes at least one subpool header, said subpool header being pointed to by said pointer of said pool header, said at least one subpool header having a pointer to a subsequent subpool header in said memory pool, said subpool header being associated with a subpool memory within said memory pool, said subpool memory having a plurality of connection blocks, each connection block being populated with a particular one of said client NAT addresses as allocated by said control block;

wherein an individual client NAT address may be either free or allocated, but client NAT addresses remain allocated in said subpool memory until all of said client NAT addresses in said connection blocks of said subpool memory are free.

2. (Original) A system as in Claim 1, wherein said control block has pool name property.

3. (Original) A system as in Claim 1, wherein said control block has a first IP address property.

4. (Original) A system as in Claim 1, wherein said control block has a last IP address property.

5. (Original) A system as in Claim 1, wherein said control block has a net mask property.

6. (Original) A system as in Claim 1, wherein said control block has a memory pool address property.

7. (Original) A system as in Claim 1, wherein said control block has an initial number of connection blocks property.

8. (Original) A system as in Claim 1, wherein said control block has a maximum number of connection blocks property.

9. (Original) A system as in Claim 1, wherein said control block has an interval list address.

10. (Original) A system as in Claim 9, wherein said interval list address has at least one interval list element.

11. (Original) A system as in Claim 10, wherein said interval list element has a pointer to a next interval list element.

12. (Original) A system as in Claim 10, wherein said interval list element has a pointer to a previous interval list element.

13. (Original) A system as in Claim 10, wherein said interval list element has a pointer to the allocated subpool for said interval list element.

14. (Original) A system as in Claim 10, wherein said interval list element has an IP address of a first client NAT address in said interval list element.

15. (Original) A system as in Claim 10, wherein said interval list element has a port number of a first client NAT address in said interval list element.

16. (Original) A system as in Claim 10, wherein said interval list element has an IP address of a last client NAT address in said interval list element.

17. (Original) A system as in Claim 10, wherein said interval list element has a port number of a last client NAT address in said interval list element.

18. (Original) A system as in Claim 10, wherein said interval list element has count of the number of client NAT addresses in said interval list element.

19. (Previously Presented) A system for allocating memory for a client network address translation (NAT) pool, comprising:

means for creating an internal control block that represents a range of client NAT addresses, each client NAT address being associated with an identity of an entity on a network;

means for creating a main pool header;

means for allocating at least one subpool header having a subpool memory block containing a plurality of connection blocks, said connection blocks containing particular client NAT addresses of the client NAT address range as allocated from said control block, said subpool header being referenced by said main pool header;

wherein said particular client NAT addresses remain allocated within said subpool memory until all of said connection blocks in said subpool memory block are freed.

20. (Previously Presented) A memory allocation system for a computer, said system comprising:

a memory pool operable to store client network address translation (NAT) addresses, each client NAT address being associated with an identity of an entity on a network;

a control block, said control block constructed and arranged to contain at least two parameters; one of said parameters for said control block being an address for said memory pool;

means for accepting user input parameters, said input parameters being contained in said control block; and

means for creating a client NAT subpool within said memory pool, said means for creating said client NAT subpool including means for allocating a client NAT address range, means for allocating to said client NAT subpool particular addresses within said client NAT address range, means for freeing said particular addresses in said client NAT address range, and means for deallocating said particular addresses in said client NAT address range;

wherein said particular addresses within said client NAT address range remain allocated within said subpool until all of said particular addresses within said client NAT address range of said client NAT subpool have been freed.